

Attorney's Docket: 2003DE410

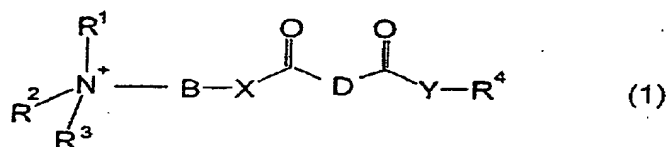
Serial No.: 10/783,153

Art Unit 1714

Response to Restriction Requirement, Dated 01/05/2007

This listing of claims will replace all prior versions, and listings, of claims in the application:

1.(Withdrawn) A method for inhibiting corrosion and gas hydrate formation in mixtures of hydrocarbon and water, said method comprising adding to said mixture a compound of formula (1)



where

$\text{R}^1$ ,  $\text{R}^2$  are each independently  $\text{C}_1$ - to  $\text{C}_{22}$ -alkyl,  $\text{C}_2$ - to  $\text{C}_{22}$ -alkenyl,  $\text{C}_6$ - to  $\text{C}_{30}$ -aryl or  $\text{C}_7$ - to  $\text{C}_{30}$ -alkylaryl,

$\text{R}^3$  is  $\text{C}_1$ - to  $\text{C}_{22}$ -alkyl,  $\text{C}_2$ - to  $\text{C}_{22}$ -alkenyl,  $\text{C}_6$ - to  $\text{C}_{30}$ -aryl or  $\text{C}_7$ - to  $\text{C}_{30}$ -alkylaryl,  $-\text{CHR}^5-\text{COO}^-$  or  $-\text{O}^-$ ,

$\text{R}^4$  is M, hydrogen or an organic radical having from 1 to 100 carbon atoms,

B is a straight-chain or branched  $\text{C}_1$ - to  $\text{C}_{10}$ -alkylene group,

D is an ethylene group substituted by an organic radical having from 1 to 600 carbon atoms,

X, Y are each independently O or  $\text{NR}^6$ ,

$\text{R}^5$ ,  $\text{R}^6$  are each independently hydrogen,  $\text{C}_1$ - to  $\text{C}_{22}$ -alkyl,  $\text{C}_2$ - to  $\text{C}_{22}$ -alkenyl,  $\text{C}_6$ - to  $\text{C}_{30}$ -aryl or  $\text{C}_7$ - to  $\text{C}_{30}$ -alkylaryl, and

M is a cation.

2.(Withdrawn) The method of claim 1, wherein B is a  $\text{C}_2$ - to  $\text{C}_4$ -alkylene group.

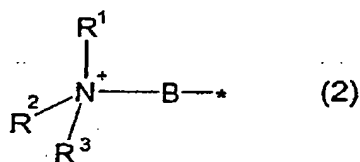
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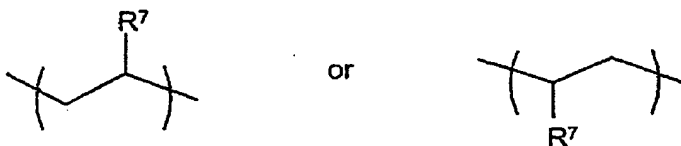
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- 3.(Withdrawn) The method of claim 1, wherein  $R^1$  and  $R^2$  are each independently an alkyl or alkenyl group of from 2 to 14 carbon atoms.
- 4.(Withdrawn) The method of claim 1, wherein  $R^3$  is an alkyl or alkenyl group having from 1 to 12 carbon atoms.
- 5.(Withdrawn) The method of claim 1, wherein  $R^5$  and  $R^6$  are hydrogen.
- 6.(Withdrawn) The method of claim 1, wherein  $R^4$  is a radical of the formula (2)



where  $R^1$ ,  $R^2$ ,  $R^3$  and B are each as defined in claim 1.

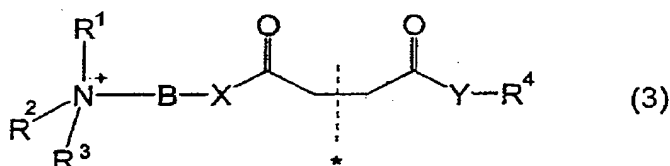
- 7.(Currently Amended) The method of claim 1, wherein D is a structural unit of the formula



in which  $R^7$  is  $C_2$  - to  $C_{100}$ -alkyl or alkenyl radicals.

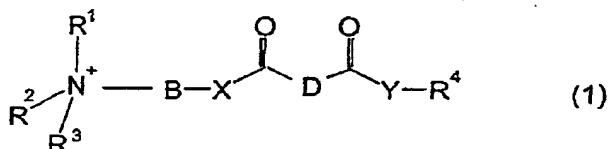
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8.(Withdrawn) The method of claim 7, wherein  $R^7$  is structural units of the formula (3).



where  $R^1$ ,  $R^2$ ,  $R^3$ ,  $R^4$ , B, X and Y are each as defined in claim 1.

9.(Previously Presented) A compound of formula (1)



where

$R^1$ ,  $R^2$  are each independently  $C_1$ - to  $C_{22}$ -alkyl,  $C_2$ - to  $C_{22}$ -alkenyl,  $C_6$ - to  $C_{30}$ -aryl or  $C_7$ - to  $C_{30}$ -alkylaryl;

$R^3$  is  $C_1$ - to  $C_{22}$ -alkyl,  $C_2$ - to  $C_{22}$ -alkenyl,  $C_6$ - to  $C_{30}$ -aryl or  $C_7$ - to  $C_{30}$ -alkylaryl,  $-CHR^5-COO^-$  or  $-O^-$ ,

$R^4$  is M, hydrogen or an organic radical having from 1 to 100 carbon atoms,

B is a straight-chain or branched  $C_1$ - to  $C_{10}$ -alkylene group,

D is an ethylene group substituted by an organic radical having from 1 to 600 carbon atoms,

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X, Y are each independently O or NR<sup>6</sup>,

R<sup>5</sup>, R<sup>6</sup> are each independently hydrogen, C<sub>1</sub>- to C<sub>22</sub>-alkyl, C<sub>2</sub>- to C<sub>22</sub>-alkenyl, C<sub>6</sub>- to C<sub>30</sub>-aryl or C<sub>7</sub>- to C<sub>30</sub>-alkylaryl, and

M is a cation.

10.(Withdrawn) The method of claim 1, wherein R<sup>4</sup> contains hetero atoms.

11.(Previously Presented) The compound of claim 9, wherein R<sup>4</sup> contains hetero atoms.